

**Committee of Visitors
for the
Federal Cyber Scholarships for Service (SFS) Program**

Program Staff Response to COV Recommendations

Questions about the quality and effectiveness of the program's use of merit review procedures.

Is the review mechanism appropriate? (panels, ad hoc reviews, site visits)

Comments:

Review panels are a good mechanism. We had no data on site visits.

PROGRAM RESPONSE:

Pre-award site visits are not conducted under the SFS program; however, program officers were able to visit with several SFS scholarship projects during the time period: UNC Charlotte and NC A&T, Mississippi State and Jackson State, University of Idaho, Carnegie Mellon University, Johns Hopkins University, George Washington University, Syracuse University, and Polytechnic University in Brooklyn.

Is the review process efficient and effective?

Comments:

The peer review process is very effective, but some members of the COV believe that in this time of constrained budgetary resources there may be a need to balance the costs associated with additional personnel versus the benefits derived from their on-site participation. See also A3.1 for a related issue.

PROGRAM RESPONSE:

We believe very strongly in the value of the panel review process, however we will continue to weigh the costs of program operation with the ability to fund worthy projects.

Do the individual reviews (either mail or panel) provide sufficient information for the Principal Investigator(s) to understand the basis for the reviewer's recommendation?

Comments:

This is not consistent across files the COV reviewed. Some are

outstanding and some have very little information in them. Panel summaries are the real value of the process.

PROGRAM RESPONSE:

We will continue to work with reviewers to encourage them to provide as much substantive information as possible in both the individual reviews and the panel summaries.

Do the panel summaries provide sufficient information for the Principal Investigator(s) to understand the basis for the panel recommendation?

Comments:

Panel summaries generally seem thorough and much improved over the individual reviews. However, some are overly brief or do not address broader impacts or intellectual merit. The COV suggests that panel members be provided with “worked examples” of good comments or reviews prior to starting the review process.

PROGRAM RESPONSE:

We continue to work with reviewers to encourage them to provide as much substantive information as possible in both the individual reviews and the panel summaries. We appreciate the COV suggestion that sample summaries be provided to the panel and we can provide this resource to reviewers.

Is the time to decision (dwell time) appropriate?

Comments:

The COV is pleased to see that the lower 2005 completion percentage was not repeated in 2006. While 2005 did not complete all decisions within 6 months, both 2004 and 2006 did.

PROGRAM RESPONSE:

Program staff will continue to work to meet NSF customer service dwell time standards. We do note, however, that although we achieved a lower completion percentage in 2005 than in 2004 and 2006, we were still well above the NSF standard of 70%.

Additional comments on the quality and effectiveness of the program's use of merit review procedures:

There are two points in the review pipeline at which there could be more information sent forward to the next step. The first is the PO Review Analyses, which do not always address every concern expressed by the Panel Summary. The COV believes the PO has an obligation to address every major negative remark of the panel when making an award.

The second point concerns the feedback to the PI on declines. We noticed that several declines, even on proposals with scores as high as 3.67 or 4.00 (so-called “high declines”), received only “boilerplate” or “form letter” PO Comments. In other cases, there was more substantive and constructive feedback to the PIs, often using language drawn from the Panel Summary. The latter seems more appropriate, and the COV believes this should be the general practice.

PROGRAM RESPONSE:

Program staff will continue to work to provide as much information as possible to PIs. Given the tremendous proposal pressure faced by POs, some boilerplate text is necessary to meet processing goals. However, we will work within the time constraints to provide additional information to PIs.

Questions concerning the selection of reviewers. Provide comments in the space below the question. Discuss areas of concern in the space provided.

SELECTION OF REVIEWERS

Did the program make use of an adequate number of reviewers?

Comments:

The COV felt that in some instances there are more reviewers than may be needed. The minimum number of members required for a panel is 3, but this number does not allow for unforeseen absences or member recusal due to conflict of interest. The number of panelists in proposals the COV reviewed varied from 5 to 7, with 6 being typical. The COV suggests 6 as the maximum number.

PROGRAM RESPONSE:

We agree that 6 panelists are sufficient to thoroughly review and discuss a set of proposals.

Did the program make use of reviewers having appropriate expertise and/or qualifications?

Comments:

Most of the review panelists were from CS/IS/IT departments of academic institutions. A variety of experience and backgrounds, especially those found in current practitioners, should be added. As the graduates of the SFS are to serve in federal agencies, government personnel should be encouraged to sit on review panels.

PROGRAM RESPONSE:

We increasingly invite reviewers from a variety of backgrounds to serve on the

panels, and every attempt is made to diversify the review panels on a host of factors including academic background, race/ethnicity, gender, geographic region, employment sector. We have increased the number of invitations sent to government personnel and although the number of non-academic reviewers continues to increase, it is a slow process. We will continue our efforts in this area in order to achieve the most appropriate balance of panel reviewers.

Did the program make appropriate use of reviewers to reflect balance among characteristics such as geography, type of institution, and underrepresented groups?¹

Comments:

The COV identified an issue regarding the number of academic versus non-academic (i.e., federal government and industry practitioner) participants. Specifically, in 2004-2006, less than twenty-five percent (25%) of the reviewers in the scholarship track were from outside academia. In addition, their percentage was aggregate; some panels were exclusively academics and the three non-academics serving in 2004 were all on the same panel. The trend is a small improvement of the ratio of non-academics to academics over the time period.

Regarding capacity building programs, the ratio is even lower, at ten percent (10%), and seems to be declining. In fact, in FY 2006, none of the reviewers were from non-academic organizations.

PROGRAM RESPONSE:

We continue to work to address this issue. When constructing review panels we must simultaneously consider several diversity issues. We try to maximize the diversity of each of the panels while simultaneously working to minimize potential conflicts of interest and align requisite knowledge and subject matter expertise. It is a complicated process. We appreciate the COV's concern and will continue to work to distribute reviewers appropriately.

Questions concerning the resulting portfolio of awards under review.

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¹ Please note that less than 35 percent of reviewers report their demographics last fiscal year, so the data may be limited.

4. Does the program portfolio have an appropriate balance of:

- Multidisciplinary projects?

Comments:

The COV applauds the trend to broader multi-disciplinary proposals from academic institutions. While the preponderance of awards has been to PIs from CS/IS/IT departments, NSF should continue to encourage the involvement of other departments (business, legal, public policy, and ethics) in the SFS program. Such a broad approach reflects the importance of “Risk Management” in information security/assurance theory and practice. This is particularly true within the federal government where the Federal Information Security Management Act has placed a premium on the adoption of a risk-based approach to IT security. The COV believes that future SFS solicitations should reflect this emphasis on risk management.

PROGRAM RESPONSE:

We appreciate the COV's insight on this issue and will continue to work with members of our academic and practitioner communities, as well as with the SFS inter-agency coordinating committee, to adapt future solicitations to meet the needs of the community. As an indication of our commitment to be responsive to the community, we note that the FY2007 solicitation was adapted to address the need for faculty development as stated by all of the SFS stakeholders.

Does the program portfolio have an appropriate balance of:

- Geographical distribution of Principal Investigators?

Comments:

The distribution seems to have improved since the previous COV, but it appears that the Midwest and the Rocky Mountain states remain underrepresented. The NSF might arrange targeting workshops to stimulate submissions from these regions. Reliance on having attained CAEIAE status may exacerbate the problem.

PROGRAM RESPONSE:

We will develop additional outreach opportunities to institutions in these regions and will encourage collaborations among institutions with CAEIAE status. It is also important to note that DHS and NSA are also working to increase the number of CAEIAE-designated institutions in these regions.

Does the program portfolio have appropriate participation of underrepresented groups?

Comments:

There is quite a difference between students and PIs. The student ratios, both minority and gender, are right at (or better than) the overall student population proportions. However, there is weaker representation among PIs in the new awards in 2004-06. Here the ratios are not good on minorities, and they are even worse on gender.

PROGRAM RESPONSE:

The lack of diversity amongst the PIs is reflective of the pool of available faculty members in these areas. We continue to encourage collaborations among PIs and we continue to support efforts to develop a more diverse set of qualified faculty in this area.

Management of the program under review. Please comment on:

Management of the program.

Comments:

The SFS program involves a great deal of collaboration with Federal agencies and with the Office of Personnel Management (OPM), so it requires continuity. This need for continuity extends beyond management to operational issues. For example, the COV noted that the program had 100% completion within a six-month window after the solicitation due date in 2004 and 2006, but not in 2005 when the last program officer transition took place (though the COV noted that the NSF target was still achieved in 2005). Thus, the COV believes that this program should be managed by a permanent program officer.

PROGRAM RESPONSE:

The Division is currently seeking to hire a permanent program officer who will lead the SFS program.

Responsiveness of the program to emerging research and education opportunities.

Comments:

The Information Assurance (IA) world has grown far beyond the boundaries of technical programs and includes many legal, ethical, and business issues. The SFS program needs to go beyond CS/IS/IT to include multi-disciplinary approaches to IA, while continuing to track the latest technological developments.

PROGRAM RESPONSE:

Although housed in technical schools, many of the SFS programs have partnered with the business and policy schools on their campuses to develop more multi-disciplinary programs. We will continue to encourage this type of collaboration.

Program planning and prioritization process (internal and external) that guided the development of the portfolio.

Comments:

The SFS program should ensure that the federal agencies using SFS graduates have the most current resources to manage their systems, and the program should seek ways to identify these resources. For example, in the annual review of the capacity building portion of the SFS program solicitation, a selected group of federal agency IA program managers should be engaged to identify issues that the program could productively address. The COV expects that a continuing examination of IA directions would ensure that issues such as those in A.5.2 are included as they emerge.

PROGRAM RESPONSE:

We appreciate the COV's comments on this issue and we will continue to work with federal agencies to stay abreast of current topics. It is important to note that in addition to the SFS ICC, the SFS program officer sits on the Federal CIO IT Workforce Committee and is involved in monthly meetings that discuss the skills needed in the Federal IT workforce.

Additional comments on program management:

Comments:

The SFS program should obtain statistics on the retention of SFS graduates in federal employment after the end of their two-year commitment. This would give Principal Investigators and the lead Program Director data that could help them understand the features of agencies and institutions that lead to long-term federal employment.

The COV recognizes the significant efforts that the lead Program Director has contributed to the SFS program and the major progress made in the program under her leadership.

PROGRAM RESPONSE:

The program is working with the program evaluators to devise an appropriate method for this data collection. In addition, we have created an alumni association to help stay in contact with program alumni even after they have completed their service requirement. The SFS program faces a special problem in tracking alumni as many are employed in the intelligence community and are unable to provide employment information.

PART C. OTHER TOPICS

Please comment on any program areas in need of improvement or gaps (if any) within program areas.

- a) While the NFS SFS program is an extremely well-managed, thoroughly reviewed, and highly successful initiative, the COV was struck by the bifurcation between the SFS role and that of OPM. The COV was extremely interested in the placement and retention of students in federal agencies. The COV believes there should be comprehensive program information for review.
- There should be statistics on retention rate within the federal government, now that the program has been in existence for 6 years.
 - An analysis should be conducted of what happens when scholarship commitments have ended. Specifically,
 - identifying those scholarship recipients leaving the federal government, and
 - if they are leaving, where are they going?

PROGRAM RESPONSE:

We are working to develop a plan for this task.

- b) The COV noted that a disproportionate number of SFS graduates go to non-civilian federal agencies despite the intent of Congress to focus this program on the civil agencies of the federal government.
- 66% of SFS students have gone to DoD/NSA and 10% to national laboratories
 - DoD has its own similar (though smaller) program.
 - Civilian agencies do not have adequate vacant positions to absorb the SFS graduates. How do we solve this?
 - OPM should have a position pool for SFS graduates for which civilian agencies, small and large, could compete.
 - These positions would be temporarily assigned to an employing agency and subsequently returned to OPM for reallocation.
- c) The COV believes the membership of the ICC should include representatives from large and small civilian agencies. The current composition is dominated by law enforcement, defense, and intelligence agencies.

PROGRAM RESPONSE:

We are in the process of revamping the ICC and have recently added new members from the Department of Agriculture and the Nuclear Regulatory Commission. We expect to have the revised ICC structure and mission solidified by summer 2007.

- d) The COV encourages SFS to allow student placement in the governments of states and larger municipalities.

PROGRAM RESPONSE:

Per the COV recommendation, we have opened placement to states and local governments.